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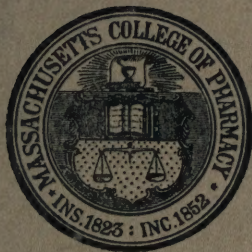
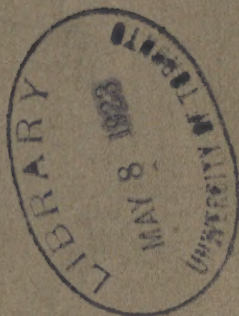
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BULLETIN *of the*

Biological
& Medical
Serials

MASSACHUSETTS
COLLEGE OF
PHARMACY

LIBRARY NUMBER, 1922



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BULLETIN

OF THE

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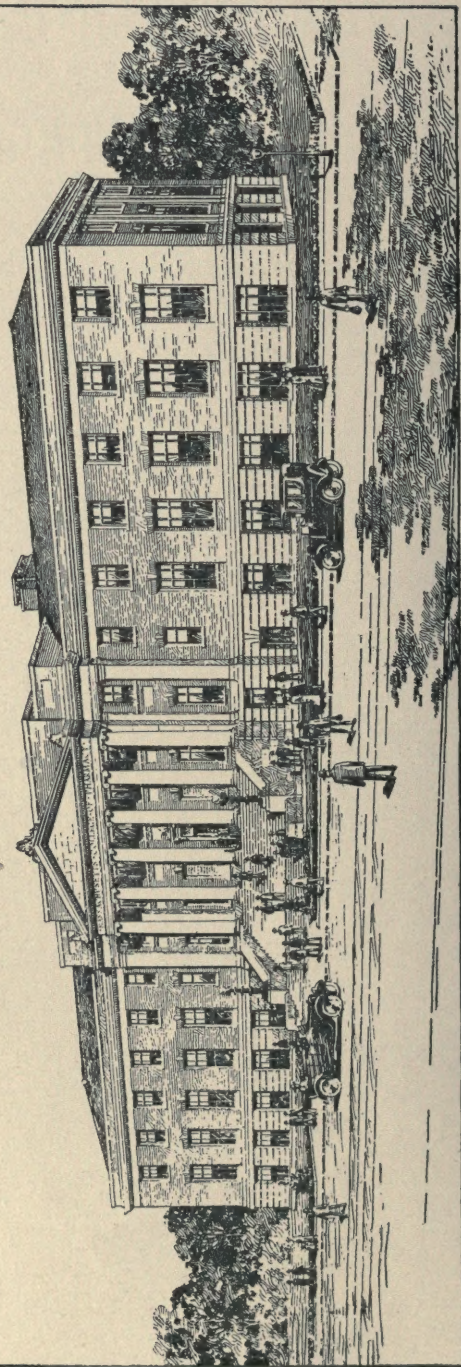
Volume XI, No. 4

THE SHEPPARD LIBRARY

The Library of the Massachusetts College of Pharmacy is one of the oldest libraries of any kind in Massachusetts, and is probably the oldest pharmaceutical library in the United States. The College was organized in 1823 and the first appropriation for its library was made early in 1824. The pharmacists of that time would be amazed at the library facilities of the Metropolitan District of the present day, which include not only the Boston Public Library and its thirty-one branches (constituting the fourth largest public library in the United States) and all the public libraries of the other cities and towns in the District, but also the Boston Athenaeum, the largest private library in New England, the Boston Medical Library, which is the largest medical library in New England and the fourth largest in the United States, the fine library of Harvard Medical School, the great Widener Library of Harvard College, the immense technical library of the Massachusetts Institute of Technology, and the many special private libraries of various kinds to which there is limited access, including those of the different schools of Boston University and of Tufts College.

A century ago there were few special or institutional libraries in the state, and there was no public library at all, the first one having been established at Wayland about 1850. It is said that the first public library in the United States was opened at Salisbury, Connecticut, in

Massachusetts College of Pharmacy



1803, but it seems to have gone out of existence before the statement was actually proved. The first one of which there is a very definite record seems to be the one established in Peterboro, New Hampshire, in 1833, with town funds.

Subscription libraries came into being from time to time in various communities in Massachusetts, and these became the nuclei of the town libraries established after the library law of 1851 became effective. This was the first state law for the establishment of public libraries to be enacted by any state in the Union.

It is highly probable that the early libraries contained very few scientific works, so that the pharmacists of those days who were not the fortunate owners of collections of technical books had little opportunity for access to any literature of the kind until the College established a library for the use of its members.

There were several literary colleges in the state before 1823 (Harvard, established in 1636, Williams in 1793, and Amherst in 1821), but presumably their libraries in 1824 consisted mostly of literary, historical, and philosophical works. The Medical School of Harvard University was established in 1782 in Cambridge, but had no separate library of its own in its early years. Books on medical subjects were added to the library of Harvard College, but remained there when the Medical School was moved to Boston in 1810. It occupied hired quarters during its first years in the city and then moved to its own building in Mason Street (in 1816) and was called the Massachusetts Medical College. At that time several members of the faculty who were especially interested in the question of a school library succeeded in getting together a collection of elementary books on medical subjects, augmented by a gift of some very valuable works. These same men also made a temporary agreement with the Boston Medical Library (not the present one of that name, but one established in 1805 by the Boston Medical Society) whereby the two libraries were united and placed under the care of the same librarian. This deposit of the books of the Boston Medical Library added two thousand volumes to the collection of the Medical College, and they were chiefly works in English and French which had not been in print over twelve years.

This pleasant arrangement continued for only seven years (from 1819 to 1826) for some reason not now very clear. In 1826 all these volumes of the Boston Medical Library were deposited at the Boston Athenaeum (which estimated their value at about \$9,000), where they remained until 1896, when they were turned over to the present Boston Medical Library, which was not established until 1875.

In 1826 the Athenaeum, established in 1807, was located in Pearl Street, where it remained until 1849, but being a private library, freely available only to its stockholders, this valuable medical collection was not very useful to the majority of the pharmacists of Boston and surrounding towns. Moreover, it is probable that the books were largely on therapeutics, with just a sprinkling of works on materia medica and chemistry, and few, if any, on pharmacy.

The "Bye-laws" of the first Board of Trustees of the Massachusetts College of Pharmacy, adopted at a meeting held on January 7, 1824, provided for the appointment of various standing committees, one of which was "a Library Committee of three members." The duties of this committee were thus defined:—

Section 2. The Library Committee shall procure with such funds as shall be placed at their disposal by the Board, a collection of books on chemistry, materia medica, pharmacy, and such other subjects as relate to the objects of the College, and shall have the general superintendence of the Library: all members of the College shall be allowed to take books from the Library, for themselves and their apprentices, under such regulations as the Board shall prescribe.

At a meeting which "was holden" at the house of the President (Dr. Ephraim Eliot) on April 2, 1824, Messrs. Daniel Noyes, Ephraim Eliot, and Henry White were appointed on the Library Committee, and it was voted that \$25 be placed at the disposal of the committee. At the annual meeting in March, 1825, an additional sum of \$50 was placed at the disposal of this committee. At the quarterly meeting of the College, in December, 1825, the Board of Trustees made a report which included these statements:—

The Library, which is of the first importance both for interest and utility, has received attention from the Board, and with what books have been received by donation and obtained by purchase and what will be purchased in the course of a few days, will consist of about 125 volumes on pharmacy, materia medica, chemistry, mineralogy, botany, on health, climate, the arts, etc. The Library will be ready for use as soon as a room can be procured for the College.

At this same meeting a report on rooms available was made, and it was voted that one be engaged and a committee was appointed to arrange for it. This committee selected a room at 92 Washington Street, over Bartlett and Brewer's, at a rental of \$50 a year. The Library Committee brought the books here and arranged them, and began to take steps towards collecting specimens for the cabinet. At a meeting of the Board of Trustees held in this room on June 21, 1826, the rules and regulations for the Library were read as prepared by the Library Committee, as follows:

All members of the College shall be allowed to take books from the Library.

The Library shall be open on every Monday afternoon from three to four o'clock for the delivery and returning of books.

Two volumes may be taken at a time, and shall be kept not more than two weeks.

Any person keeping a book over the regular time shall pay ten cents per week for the detention, and if detained more than six weeks shall pay for the book.

Books injured or lost shall be paid for by the person who took them from the Library.

All books to be returned to the Library on the Monday preceding the second Wednesday in March annually for inspection.

At this meeting of the Board it was voted to elect a librarian, and Mr. Brewer was chosen. At the quarterly meeting of the College, on the same day, the rules and regulations for the Library were approved and the following vote was passed:

Any member can have access at any time to the Room to examine books or specimens, etc., but no book can be taken except at such time as is specified in the regulations for the Library — namely, from three to four o'clock on each Monday afternoon.

At an adjourned meeting of the Trustees, on June 28, "Mr. Noyes reported that Mr. S. N. Brewer accepted the office of librarian," and it was voted that a further sum of twenty-five dollars be placed at the disposal of the Library Committee.

In the spring of 1827 the College moved its library and other possessions to a room at 11 Market Street, which it occupied for several years, but the annual meeting of March, 1830, was held in the old quarters at 92 Washington Street. Early in the fall of 1831 the Library Committee was given full power to hire a room for a year and have it prepared for the next meeting of the College. The committee engaged a room "over Mr. Bacon's in Court Street," and the Trustees' meeting of September 28 was held there. It was voted, that day, "that \$50 be added to the appropriations to the Library Committee of 1830 and 1831." This made a total of \$200 appropriated for library purposes. The College occupied the Court Street quarters for over three years, but in the spring of 1834 the library and cabinet were moved to 22 Cornhill. In March, 1834, Mr. Edward Noyes was elected Librarian. At the quarterly meeting of the College in December, 1834, this vote was passed:

That those members having books in their possession belonging to this Society, be requested to return them to the Librarian previous to the meeting to be holden in March next.

That a committee of four be chosen, from the four sections of the city, to call upon all the members in their section and notify them of the above report, and receive all books in their possession and pass the same over to the Librarian of the Apothecaries' Library, the committee to consist of Messrs. James Fowle, Seth Fowle, Joshua P. Preston, and Joseph T. Brown.

At the annual meeting in March, 1835, this committee reported a list of missing books. The members of the committee were re-elected and instructed "to furnish a list of books to all past and present members of this College, with a view to obtaining said books or any information respecting them."

In June, 1836, it was voted to print a catalogue of the Library, in conjunction with the revised *Constitution*, and this was done, it being the second catalogue to be printed. The first catalogue was not dated, but the pamphlet contained also a "*Course of study for the apprentices*" and a "*List of members belonging to the Massachusetts College of Pharmacy.*" This list of members makes it possible to place the date of publication in the year 1829. A facsimile of the first page of this earliest catalogue appears in this issue of the *Bulletin*.

Joseph Kidder was elected Librarian in 1836 and was re-elected the following year. Appropriations continued to be made for the Library for some years, but between 1843 and 1850 the interest in it waned somewhat. On the last day of 1850 a meeting was held at the Exchange Coffee House for the purpose of renewing interest in College affairs, and in 1851 Messrs. Joseph Kidder, W. A. Brewer, and Henry W. Lincoln were appointed on the Library Committee and \$50 was appropriated for making additions to the Library. Later in the year seven resolves were passed relating to issuing stock, the first three being these :

First, to appraise the property of the College and convert it into stock at \$10 a share.

Second, to issue at least 100 new shares of \$10 each, to be offered to members of the College, and to others interested in its object, for the purpose of furnishing rooms for lectures, library, etc., and for making additions of most of the pharmaceutical and medical journals, and all new and valuable works connected with pharmacy.

Third, the rooms, under suitable restrictions for the preservation of the property, to be at all times accessible and convenient to the stockholders and members of the College.

In July, 1852, it was voted that the Library Committee be added to the Committee on Stock, and that they be requested to collect the subscriptions and to purchase books, etc., for the College. It was in 1852 that the College was incorporated.

The records show that from this time on the interest in the Library was considerable, as they contain frequent mention of library matters. In 1855 a letter was received from Honorable J. D. Bright of the United States Senate, requesting information concerning the Library.

After occupying rooms in Masonic Temple and in Phillips Place, the College, in 1856, engaged quarters in the Perkins House in Temple Place, in connection with the Massachusetts Medical Society, which

LIBRARY
OF THE
MASSACHUSETTS COLLEGE
OF
PHARMACY.

Accum's Analysis of Minerals

——— Chemical Tests

——— Experiments

——— on Culinary Poisons

American Journal of Science and Arts, 10 vols.

Brown's Elements of Medicine

Blumenback's Physiology, 2 vols.

Bell on Surgery, 4 vols.

Bethollet on Dyeing, 2 vols.

Bergman's Chemistry, 3 vols.

Black's Chemistry, 3 vols.

Digelow's Medical Botany, 3 vols.

Brown's Elements of Medicine

Chaptals Chemistry, 2 vols.

Cooper on the Joints

Chemical Catechism

Cleaveland's Mineralogy, 2 vols.

Complete Mercantile Guide

Cheyne on Croup

they continued to occupy for many years; it was in these rooms that the School of Pharmacy was established, in 1867.

In 1866 the Library received a donation "of very valuable works on botany and materia medica and specimens" from the estate of John P. Hall. Contributions of books were made from time to time by many people who were interested in the College, the largest of these before 1889 having come from Edward Brinley and from John Eliot.

Samuel Arius Darlington Sheppard was elected a member of the College on August 5, 1868, and became a member of the Board of Trustees in 1870. In 1873 he was appointed on the Library Committee, and later was elected Librarian. A library report dated February 27, 1874, after listing the additions of the previous year — wholly volumes of journals, states:

There is a great need of increasing the usefulness of the Library by the purchase of the more important works on chemistry, materia medica, and the allied sciences. The expenditure of from \$100 to \$500 would be a great help to the School of Pharmacy, by giving the students access to books of reference too expensive to be purchased by students.

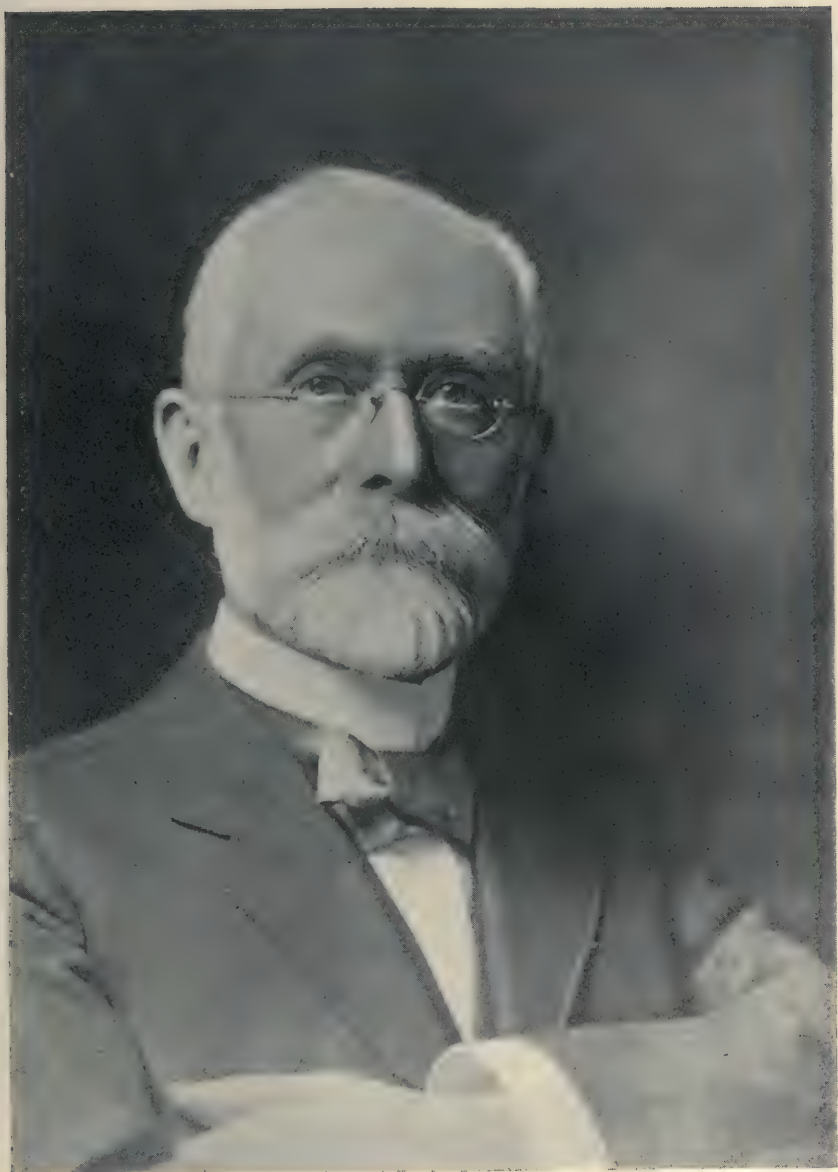
For the session of 1876-1877, the school, which had been occupying quarters at 8 Boylston Street since 1873, was moved to the old Mayhew School building, but there was a serious fire here in January, 1877, so that the rest of that session was held at the Massachusetts Institute of Technology. The Library Committee's report at the annual meeting of March, 1878, stated:

After the fire the library and cabinets were stored in rooms over the store of Vice-President T. L. Jenks, and from thence removed to the new College rooms in the old Franklin School building.

Your Committee take much pleasure in reporting that the Library did not suffer any material loss. The cabinet was very badly damaged, many valuable specimens having been totally ruined.

The Library has been very carefully arranged by our efficient Librarian, Mr. Samuel A. D. Sheppard, who has very kindly loaned a large number of his own books to the Library, thus adding much to its value. The Philadelphia College of Pharmacy has very generously donated a number of back volumes of the *American Journal of Pharmacy* to supply the loss in our library set.

In 1885, Dr. Bennett F. Davenport, then Professor of Practical and Analytical Chemistry, gave \$200 to the College, the income to be used for the support of the Library. This money was invested and is in the care of the Trustees of Funds; none of the income has been spent as yet, as it has been allowed to accumulate, and at the end of the last fiscal year it amounted to \$579.82. It is probable that when this fund amounts to \$1,000 that the income will be used annually for the purchase of valuable books for reference.



SAMUEL A. D. SHEPPARD

For many years Mr. Sheppard's favorite hobby was collecting pharmacopoeias of various periods from many countries, and also valuable works on medical botany. For his pharmacopoeias he had boxes made of light-weight wood like an open pamphlet box, but covered with red cloth and morocco. The morocco backs of these boxes were tooled and lettered in gold like the backs of books, so that his collection presented a uniform appearance of shelves upon shelves of beautiful red volumes in half morocco, whereas the actual books in the boxes were oftentimes worn brown leather volumes some two hundred years old.

In November, 1889, Mr. Sheppard presented to the College his collections of about twenty-five hundred bound and unbound works on pharmacy, botany, chemistry, and kindred subjects. At the next meeting of the Trustees, on December 2, it was voted to accept this valuable gift and to name the Library for Mr. Sheppard; also, that the thanks of the College be tendered him by resolutions, suitably engrossed, and that the Trustees, as a personal tribute, tender him a dinner. At this dinner, given at Young's Hotel on the evening of December 18, 1889, the resolutions, engrossed and framed, were presented to Mr. Sheppard. A part of this testimonial follows:

Resolved, That this public-spirited and generous gift is worthy of more than ordinary consideration and that the thanks of the College be tendered by these resolutions as evidence of their appreciation and regard.

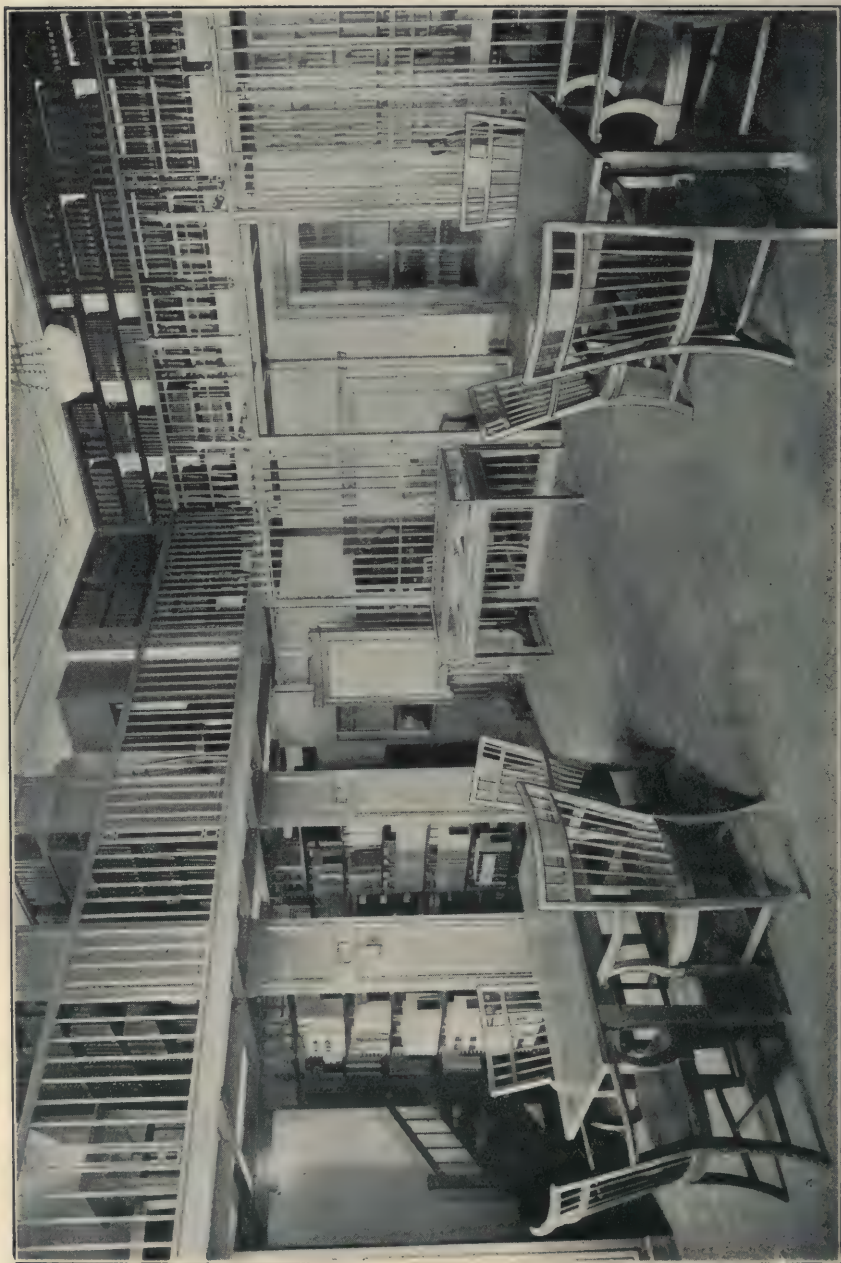
Resolved, Moreover, that we esteem this gift as exemplifying the characteristic generosity of the donor, an earnest and true friend of the College, one foremost in all matters pertaining to pharmacy, national or local, and that we take just pride in still claiming him as one of its most valuable and efficient officers.

Since 1889 the Library has received various gifts of books, largely sets or parts of sets of journals and of proceedings of societies, notably from the old firm of C. & J. Price of Salem, from the estate of Thomas Doliber, '69, from the late William C. Durkee, '75, from Dr. Davenport, and from Dean Bradley.

The College makes annually a special appropriation from the general funds for the Library, and many new books are added each year. It contains now about 6,000 bound volumes and many pamphlets. Since 1913 the Library has been in charge of a trained librarian. After a considerable study of various classifications, a system of classification for the library of a college of pharmacy was worked out, and the books in the Sheppard Library were reclassified by it. This classification was published in the *Bulletin* in 1916 and was reprinted in pamphlet form later.

The present quarters of the Library are very attractive, but there is now need of a much larger reading room. The main room has a gallery around three sides, a stack room beneath it, and a workroom adjoining. Mr. Sheppard's collection of pharmacopoeias is shelved at the right of the main entrance to the Library, and a large and very pleasing photograph of him hangs on the opposite wall; he seems to be gazing thoughtfully at the gleaming red and gold of those eighteen shelves of pharmacopoeias once his own.

The Library is being used more every year, and not only by the school to which it belongs, but by members of the faculties and students of other institutions, such as Harvard University and the Massachusetts Institute of Technology, and by representatives of various manufacturing interests in the Metropolitan District.



SHEPPARD LIBRARY

SHEPPARD LIBRARY

RECENT ADDITIONS

G indicates gift

CHEMISTRY, THEORETICAL, PRACTICAL, AND MISCELLANEOUS

- Analyst.** Vols. 45-46. 1920-1921. BB An11
- Armstrong, E. F.** The simple carbohydrates and the glucosides. 3d ed. 1919. EC Ar57
- Presents in logical relation the advances that have been made in this subject in the last 15 or 20 years, and is a clear and interesting summary in fair detail of the present state of our knowledge of the sugar group. *Journal of Industrial and Engineering Chemistry.*
- Chamberlain, J. S.** A textbook of organic chemistry. 1921. E C35
- Presents the important facts of organic chemistry with regard to the needs of students. One thing which appeals to us is the sense of proportion shown in the arrangement and presentation of the various topics, emphasizing a unity of the subject that is too frequently submerged by many teaching chemists. *Pharmaceutical Era.*
- Chemical Catalog Company, Inc.** Chemical engineering catalog. 7th annual ed., 1922. BS C42
- Chemical News.** Vols. 120-123. 1920-1921. BB C42
- Chemists' Year Book.** Edited by F. W. Atack and L. Whinyates. 2v. 1920. B C42
- Volume one embraces sections on atomic weights, with useful tables; a very practical qualitative analysis section including treatment of some of the rarer elements; sections on reagents, gravimetric, volumetric, gas, ultimate organic, electro- and spectrum analysis, invaluable tables, five-place logarithms, and various mathematical constants. Volume two embraces 180 pages of physical constants, followed by an excellent illustrated section on crystallography. Sections follow on mineral properties, technical analysis and control, including water, fuel, oils, paints, sugar, textiles, dyes, pharmaceuticals, etc. *Journal of Industrial and Engineering Chemistry.*
- Cohen, J. B.** Organic chemistry for advanced students. 3v. 1920. E C66a
- Rather a discussion of selected topics for the specialist than a comprehensive treatise. *Library Journal.*
- Copaux, H.** Introduction to general chemistry: an exposition of the principles of modern chemistry. Trans. by Henry Leffmann. 1920. CB C79
- Presents in a clear and concise manner a large amount of information on the modern theoretical principles of chemistry, without devoting too much space to the ultra-modern and radical theories now being propounded. *Journal of the American Pharmaceutical Association.*
- Deming, H. G.** Manual of chemical nomography. 1918. BP D39
- This manual is accompanied by a book of 18 charts for calculation of products, quotients, reciprocals, square roots, etc., all of which can also be found by aid of the slide rule. The great advantage in the nomographical method is that it can be extended to the solution of algebraic equations which are frequently encountered in chemical calculations. Thus, the calculations following the analysis of mixtures or that of organic compounds are very simple. *Journal of Industrial and Engineering Chemistry.*
- Nomon: a calculating chart. 1918. BP D39a
- Dreaper, W. P.** Notes on chemical research. 2d ed. 1920. CZ D81
- Treats the subject in a philosophical and, at the same time, in a most sane and practical manner. It should be carefully read by everyone contemplating taking up chemical research, and those who are making it their life work will find much of interest and value in the book. While written from an English point of view, there is very little in it which does not apply to American conditions. *Journal of the American Chemical Society.*
- Dyson, S. S.** Manual of chemical plant. 1916. BS D98
- Presents a record of the practical outcome of research and experiment as embodied in the range of plant which is actually available for the carrying out of the operations and processes of industrial chemistry, for the author has made a long and patient examination of the claims of almost every new piece of chemical plant which has been introduced during the last quarter of a century. *Preface.*
- Hawk, P. B.** Practical physiological chemistry. 7th ed. 1921. EV H31
- Hillebrand, J. H.** Principles of chemistry. 1918. CB H55
- Has real freshness and originality of treatment of its subject-matter. *Library Journal.*

- Holleman, A. F., and Cooper, H. C. Text-book of inorganic chemistry. 6th ed. 1921. D H72
- International Library of Technology. Vol. 15C. Inorganic chemistry. 1915. D In8
- Vol. 16C. Organic chemistry. 1913. E In8
- Jones, Walter. Nucleic acids: their chemical properties and physiological conduct. 2d ed. 1920. EU J72
- Journal of the American Chemical Society. Vols. 42-43. 1920-1921. BB Am35j
- Lucas, A. Forensic chemistry. 1921. BZ L96
- Luff, A. P., and Candy, H. C. H. Manual of chemistry, theoretical and practical, inorganic and organic. 6th ed. 1918. CF L96
- Covers very fully the fundamentals of chemistry which must be understood by the pharmacy student. *Pharmaceutical Era*.
- McCoy, H. N., and Terry, E. M. Introduction to general chemistry. 2d ed. 1920. CB M13
- McPherson, William, and Henderson, W. E. A course in general chemistry. 2d ed. 1921. D M24a
- Mellor, J. W. Comprehensive treatise on inorganic and theoretical chemistry. Vols. I-II. 1922. Ref. D M48
- At the present time there is no complete treatise in the English language on inorganic and theoretical chemistry, and so the importance of Dr. Mellor's proposed work is considerable. These first two volumes are very clearly and carefully written, and every effort has been made to substantiate each point with the fullest bibliographical references. Volume I is chiefly historical and introductory, the remaining chapters being devoted to hydrogen, oxygen, and their compounds. The historical treatment is remarkably extensive and interesting. Volume II discusses the halogens and alkali metals. *The Analyst*.
- Noyes, W. A. College textbook of chemistry. 1919. D N87
- Sadtler, S. P., and others. A text-book of chemistry intended for the use of pharmaceutical and medical students. 5th ed. 1918. CF Sa15
- Smith, Alexander. Experimental inorganic chemistry. 5th ed. 1919. DA Sm51a
- The text is so full of questions and references that it would seem practically impossible for the user of the book to do his work heedlessly or lose sight of the principles involved. Great stress is laid upon the need for attention to quantitative relations. *Chemical News*.
- Laboratory outline of college chemistry. 1919. DA Sm51
- Laboratory outline of elementary chemistry. 1920. DA Sm51c
- Text-book of elementary chemistry. 1921. D Sm51c
- Smith, James Hart-. Recent discoveries in inorganic chemistry. 1919. D Sm61
- There are many interesting things in this small volume which we did not know before, and it will certainly furnish a stimulating supply of new material to those dependent on the somewhat shop-worn information offered by the standard text-books. The title is unfortunate, as much of the subject-matter is from 10 to 15 years old, and the treatment is sketchy and incomplete when compared with the similar work by Stewart. *Journal of the American Chemical Society*.
- Stewart, A. W. Recent advances in organic chemistry. 4th ed. 1920. E St49
- The selection of material out of many fields of interest is a difficult problem, but has been successfully overcome by holding the balance evenly between the theory and the practice of the subject, so as to give as fair a representation of the whole field as possible. *Pharmaceutical Journal and Pharmacist*.
- Underhill, F. P. Manual of selected biochemical methods. 1921. EUa Un2

PHYSICAL CHEMISTRY

- Bancroft, W. D. Applied colloid chemistry: general theory. 1921. CU B22
- A work which teems with ideas and suggestions as to how data and information acquired in one field may be applied effectively to a wide range of other fields. It would be difficult to open the book at any point without encountering some stimulating idea or suggestion. Perhaps the most striking feature is the fearless way in which data are weighed and criticised and much chaff that has passed for grain in previous text-books is shown up for what it is worth. *Journal of Industrial and Engineering Chemistry*.
- Bechold, H. Colloids in biology and medicine. 1919. CU B38
- Burton, E. F. Physical properties of colloidal solutions. 2d ed. 1921. CUa B95

Falk, K. G. Chemical reactions: their theory and mechanism. 1920. CK F18

This interesting book is an exposition of the electronic conception of valence. Agreeably written, the presentation being sober, thoughtful, and entirely free from that spirit of propaganda so common in books presenting an unorthodox point of view. *Journal of the American Chemical Society.*

Hackh, I. W. D. Chemical reactions and their equations. 1921. CK H11

Presents in easily understandable language the meaning of symbols, defining the conception of atoms, molecules, ions and ionization, and explains chemical formulas, valency and valence numbers, etc. The treatment of the subject is most satisfactory from beginning to end. *Pharmaceutical Era.*

Lewis, W. C. M. A system of physical chemistry. 3v. 2d-3d eds. 1919-1920. CJ L58

Vol. 1. Kinetic theory.
Vol. 2. Thermodynamics.
Vol. 3. Quantum theory.

Ostwald, Wolfgang. An introduction to theoretical and applied colloid chemistry. 1917. CU Os7

Robertson, T. Brailsford. Physical chemistry of the proteins. 1920. EUB R54

Material on the physico-chemical behavior of the proteins has been scattered widely in medical, biological, and chemical literature, no real attempt having been made to correlate them into one volume until this author endeavored to do it. As a whole the book is noteworthy and valuable. *Pharmaceutical Era.*

Stewart, A. W. Some physico-chemical themes. 1922. CJ St49a

Walker, James. Introduction to physical chemistry. 8th ed. 1920. CJ W15

A perfectly modern, lucidly written, elementary text-book of physical chemistry, in which the fundamental facts and theories are clearly set out, and their importance in the older branches of the subject indicated. *The Analyst.*

Zsigmondy, Richard, and Spear, E. B. The chemistry of colloids. 1917. CU Z81

Part I. Kolloidchemie, by Richard Zsigmondy, translated by E. B. Spear. Part II. Industrial colloidal chemistry, by E. B. Spear. A chapter on colloidal chemistry and sanitation, by J. F. Norton.

ANALYTICAL CHEMISTRY

Autenreith, Wilhelm. Laboratory manual for the detection of poisons and powerful drugs. 5th Amer. ed. 1921. HC Au81

Boone, W. F. Complete course of volumetric analysis. 1918. GC B64

Chemist-Analyst. Nos. 33-37. April, 1921-Aug. 1922. H C42

Fuller, H. C. Chemistry and analysis of drugs and medicines. 1920. HB F95a

Intended to supplement and amplify the information contained in his smaller book. It is a comprehensive and thorough presentation of a subject which has received little attention except in articles scattered through chemical and pharmaceutical literature. The information and methods of analysis given are unusually complete and satisfying in their method of presentation. There is no other book in the English language which covers the range of subject-matter included in this volume. The index is glaringly incomplete, and the book is best used in conjunction with the author's smaller one, which gives the elementary details of procedure and the fundamental facts concerning certain group classes of preparations and their treatment. *Journal of the American Chemical Society.*

Gradwohl, R. B. H., and Blaivas, A. J. Newer methods of blood and urine analysis. 2d ed. 1920. HM G75

Griffin, R. C., editor. Technical methods of analysis as employed in the laboratories of Arthur D. Little, Inc. 1921. H G87

Contains a comprehensive selection of practical methods of analysis, some original, but most of them already well known; many of these, however, have been more or less modified in the light of experience gained through many years of practice. The methods are described in a direct and practical manner. There is a series of analytical tables and a good bibliography of books and pamphlets. *Chemical News.*

Heitzmann, Louis. Urinary analysis and diagnosis by microscopical and chemical examination. 4th ed. 1921. HN H36

International Library of Technology. Vol. 17B. Qualitative analysis. Quantitative analysis, Parts 1-3. 1906. Vol. 1 of H In8

Vol. 70. Quantitative analysis, Parts 4-9. 1906. Vol. 2 of H In8

Newth, G. S. Manual of chemical analysis, qualitative and quantitative. 1919. H N48

Perkin, F. M. Qualitative chemical analysis. 4th ed. 1920. F P41

Prescott, A. B., and Johnson, O. C. Qualitative chemical analysis. 7th ed., rev. by J. C. Olsen. 1920. F P92

- Schimpf, H. W.** Essentials of volumetric analysis: an introduction to the subject, adapted to the needs of students of pharmaceutical chemistry. 3d ed. 1917. GC Sch34
- Sherman, H. C.** Methods of organic analysis. 2d ed. 1920. HE Sh55
- Stephenson, C. H.** Some microchemical tests for alkaloids. 1921. HI St45
- A notable contribution to the subject of which it treats; it contains the result of much original work, and of a very large amount of experimental work which has not been published elsewhere. In addition to the description of crystalline precipitates, a full account is given of the melting points and chemical examination of the various alkaloids employed in the investigations. *The Analyst*.
- Treadwell, F. P.** Analytical chemistry. Translated by W. T. Hall. 2v. H T71
- Vol. 1. Qualitative analysis. 5th English ed. 1921.
- Vol. 2. Quantitative analysis. 5th English ed. 1919.

CHEMICAL TECHNOLOGY

- Askinson, G. W.** Perfumes and cosmetics: their preparation and manufacture. 4th ed. 1915. IGa As49
- Contains brief descriptions of the various plants and other sources from which the aromatic oils are obtained, together with the principal methods used for their extraction. The use of synthetic perfumes is touched upon, and a good table given showing the chief physical properties of these bodies. There is an interesting chapter on the antiseptic and therapeutic value of perfumes. The remainder of the book contains a large number of formulae for the manufacture of perfumes and toilet preparations of all kinds. *Chemical News*.
- Barrowcliff, M., and Carr, F. H.** Organic medicinal chemicals (synthetic and natural). 1921. IEa B27
- Probably the only book published in English which deals so fully and practically with the manufacture of the substances of which it treats. *Pharmaceutical Journal and Pharmacist*.
- Deite, C., with collaboration of others.** Manual of toilet soap-making, comprising toilet soaps, medicated soaps, and other specialties. 2d Eng. ed. 1920. IJa D36
- This book is not only comprehensive in its character, but in wealth of detail, chemistry of materials entering into the manufacture, methods of analysis, etc., it represents the most recent technical knowledge and the latest improvements which have to do with the manufacture of toilet soaps and related specialties. There is also a section on the commercial value of soaps. *Pharmaceutical Era*.
- International Library of Technology.** Vol. 18B. Sulphuric acid. — Alkalies and hydrochloric acid. — Manufacture of paper. 1902-1910. IE In8
- Vol. 19B. Packing-house industries. — Manufacture of leather. — Manufacture of soap. 1902-1909. I In8
- Vol. 20C. Manufacture of sugar. — Cottonseed oil and products. — Petroleum and products. — Water softening. 1902-1910. I In8a
- Journal of Industrial and Engineering Chemistry.** Vols. 12-13. 1920-1921. IB J82
- Lamborn, L. L.** Modern soaps, candles, and glycerin. 3d ed. 1920. IJa L17
- Martin, Geoffrey.** Animal and vegetable oils, fats, and waxes: their manufacture, refining, and analysis, including the manufacture of candles, margarine, and butter: a practical treatise. 1920. IJ M36
- Parry, E. J.** The raw materials of perfumery, their nature, occurrence and employment. IGa P24
- A popular account of how the whole art of perfumery has been revolutionized by the aid of synthetic chemistry, by a recognized authority on the essential oils and substances used in perfumery. His treatment of the subject is excellent. *Pharmaceutical Journal and Pharmacist*.
- Simmonds, Charles.** Alcohol; its production, properties, chemistry, and industrial applications, with chapters on methyl alcohol, fusel oil, and spirituous beverages. 1919. IE Si47
- This is a work of standard character and its compilation shows internal evidence not only of great care and accuracy, but also of scholarly enthusiasm for the subject. The arrangement is admirable and a judicious balance is maintained of the relative importance of the several matters dealt with. It is a real contribution to a highly important branch of chemical literature. *The Analyst*.
- Sutormeister, Edwin.** Chemistry of pulp and paper making. 1920. IR Su83

- Thorpe, Sir Edward.** A dictionary of applied chemistry. Revised. Vols. 1-3. (A-K inclusive.) 1921-1922. Copy 3 of IA T39
Whymper, R. Cocoa and chocolate. 2d ed. 1921. IC W62
 The standard work in English on the chemistry and manufacture of cocoa and chocolate. The first section contains as much information on the history, botany, and agriculture of cocoa as the analyst could desire. The second section deals with the manufacture of chocolate and cocoa powders, is up to date throughout, and contains much that is of value. The third and last section is of especial interest to the chemist: it deals with the chemistry of cocoa and its products, and gives a complete survey of the component parts and the methods of analysis, which are set out clearly and fully. *The Analyst*.

PUBLIC HEALTH

- American Journal of Public Health.** Vol. 11. 1921. J Am35
American Public Health Association. A half century of public health. 1921. JD Am35
International Library of Technology. Vol. 98. Water supply. — Sewerage. — Purification of water. — Sewage purification and disposal. — Irrigation. 1908. JO In8
Massachusetts. Department of Public Health. Annual report, 1920. JA M38a
 ——— The commonwealth. Vols. 7-8. 1920-1921. JA M38d
Rideal, Samuel, and Rideal, E. K. Chemical disinfection and sterilization. 1921. JPg R43
 ——— Disinfection and the preservation of food, together with an account of the chemical substances used as antiseptics and preservatives. 3d ed. 1903. JPg R43a
 G.

FOOD

- Bailey, E. H. S.** Source, chemistry, and use of food products. 1914. JS B15
Cathcart, E. P. The physiology of protein metabolism. New ed. 1921. JSe C28
Funk, Casimir. The vitamins. Authorized translation by H. E. Dubin. 2d ed. 1922. JSa F96
 This edition is replete with the results of recent investigations and contains a bibliography giving titles of almost 1,600 articles. The book is divided into three parts, the first treating of the vitamin requirements of plants and of animals, the second of the chemistry, physiology, and pharmacology of the vitamins, and the third of the human "avitaminosis" or the conditions in which vitamins play a role. There is no other book which treats the subject so comprehensively both from the clinical and from the laboratory point of view, as this. *American Journal of Public Health*.
Harrow, Benjamin. Vitamines, essential food factors. New ed. 1922. JSa H24
 Arrangement of the subject-matter is logical and good and the description of feeding experiments with deficient proteins forms a most desirable introduction to the titular portion of the text. All in all the book offers a simple, direct, and accurate presentation of facts and theories which are of interest and of importance to the laity. *Journal of the American Chemical Society*.
Plimmer, V. G., and Plimmer, R. H. A. Vitamins and the choice of food. 1922. JSa P71
Thresh, J. C., and Porter, A. E. Preservatives in food and food examination. 1906. G. JX T41
Ward, Artemas. The grocer's encyclopedia. 1911. JS W21
 A compendium of useful information concerning food of all kinds; many good illustrations including 80 colored plates.

BACTERIOLOGY

- Bitting, K. G.** Effect of certain agents on the development of some moulds. 1920. KN B54
 This monograph, issued primarily as a study in food preservation, contains many observations which also apply to drug preparations. *Pharmaceutical Era*.
Guilliermond, Alexandre. The yeasts. Translated and revised by F. W. Tanner. 1920. KH G94
 Not a mere translation of the French publication of 1912, for Dr. Tanner has added much new material. The book should prove invaluable to biologists and industrial workers who are concerned with purely fermentation products, as well as to agriculturists. It has a very complete list of footnote references and a bibliographical as well as an author and subject index. *Journal of Industrial and Engineering Chemistry*.

Marshall, C. E., editor. Microbiology. 3d ed. 1921. KI M35

Written by 25 contributors, mostly professors in American colleges and universities, but representing also France and Germany, each with special knowledge of his subject. The book is certainly one of great value. It is divided into three distinct parts: 1. Morphological and cultural; 2. Physiological; 3. Applied. *The Analyst*.

Morrey, C. B. Fundamentals of bacteriology. 2d ed. 1921. K M83

Schneider, Albert. Pharmaceutical bacteriology. 2d ed. 1920. KW Sch58

A decided enlargement of the first edition and a very comprehensive work. The chapters on history and origin of bacteria and other micro-organisms, general morphology, and physiology are very extensive and well written. About 100 pages are devoted to symbiology, zymology, yeasts, and molds, etc. The chapters on immunology, serology, disinfection, and communicable diseases are extensive, complete, and modern. *Journal of the American Pharmaceutical Association*.

Stitt, E. R. Practical bacteriology, blood work, and animal parasitology. 6th ed. 1920. K St59

Includes bacteriological keys, zoological tables, and explanatory clinical notes.

Tanner, F. W. Bacteriology and mycology of foods. 1919. KN T15

MATERIA MEDICA, MICROSCOPY, TOXICOLOGY, MEDICINE

American Drug Manufacturers' Association. Origin and history of all the pharmacopoeial vegetable drugs, chemicals, and preparations, with bibliography. MDa Am35

Vol. 1. Vegetable drugs, 8th and 9th decennial revisions. (Botanical descriptions omitted.) By J. U. Lloyd. 1921.

American Medical Association. New and non-official remedies, 1921.

Ballard, C. W. The elements of vegetable histology. 1921. MF Am35

Intended for the beginner, to give him a knowledge of general principles without confusing him with the minutiae of the subject, and is largely devoted to laboratory methods and their application by the student. Contains 75 plates and illustrations. There is much information for the worker with the microscope in an appendix. *Pharmaceutical Era*.

Blyth, A. W., and Blyth, M. W. Poisons, their effects and detection. 5th ed. 1920. N B62

The various poisons are dealt with at fair length in most cases, and some very fully: the di-phenols are not included. Some errors of previous editions still remain in this one, but it will be found a valuable book for reference, notwithstanding these blemishes. Many methods of analysis are described. Considerable stress is laid on micro-chemical methods for the detection of poisons. *The Analyst*.

Buck, A. H. The dawn of modern medicine. 1920. OD B85a

A companion volume to his *The growth of medicine*. With the aid of old French, English, and Latin treatises, Dr. Buck reconstructs conditions in Western Europe in the latter half of the eighteenth century, when the science of medicine witnessed a remarkable revival, and he describes the personalities and activities of those to whom the surge forward was due. The work is illustrated from old prints and paintings, and holds as much interest for the intelligent layman as for the physician and student. *Scientific American*.

Bush, A. D. Laboratory manual of pharmacology, including materia medica, pharmacopaedics, and pharmacodynamics. 1919. MOa B96

Cabot, R. C. A layman's handbook of medicine. 1916. OVa C11

Cow, Douglas. Pharmacology. (Students' synopsis series). 1920. M C83

Not intended to displace any of the recognized text-books but to be used along with them. Arranged by paragraphs, alphabetically, and adapted for the final reading as a refresher of the students' memory before examination. *Journal of the American Pharmaceutical Association*.

Index Medicus. Vols. 18-19. 1920-1921. OBA In2

Lilly, E., and Co. Handbook of pharmacy and therapeutics. 6th ed. 1919. G. MA L62

Schneider, Albert. The microanalysis of powdered vegetable drugs. 2d ed. 1921. MQh Sch58

A short history of the microscope and its use in pharmacy, followed by chapters on general characteristics of vegetable powders, preparation of powdered drugs, adulteration and systematic microscopical examination of them, etc., make up about one third of this book, a well illustrated account of the microscopical characteristics of individual drugs filling the remainder. *Spatula*.

— **The microbiology and microanalysis of foods.** 1920. MQi Sch58

Intended as a guide to the study of the microbiological decomposition changes in foods. It also presents a practical working basis for ascertaining the decomposition limits of foods suitable for human consumption, by means of the direct methods of microanalysis. The proposed food ratings are based upon many years of practical experience in the examination of all kinds of food products and are believed to be fair to both consumer and manufacturer. *Preface*.

- Smith, G. E., and Pear, T. H.** Shell shock and its lessons. 2d ed. 1917. G. ON Sh43sm
- Sollmann, T. H.** A laboratory guide in pharmacology. 1917. MOa So46
- A manual of pharmacology and its application to therapeutics and toxicology. 1920. MO So46
- The book is sound and contains such a wealth of material that it is practically an encyclopedia of the subject. It gives a concise description of each drug, its source and its chemical and physical properties, discusses its pharmacologic actions in a comprehensive and painstaking way, and indicates discriminatingly its therapeutic possibilities and limitations. *Journal of the American Medical Association.*
- Stiles, P. G.** Human physiology: a text-book for high schools and colleges. 2d ed. 1921. OH St53
- Youngken, H. W.** A text book of pharmacognosy. 1921. MH Y89
- The first impression one gets is that the book was written by a teacher who understands how to present the subject to the student mind. It is a real text-book and should appeal not only to students, but to pharmacognocists in all lines of work. *Journal of the American Pharmaceutical Association.*

PHARMACO-DYNAMICS AND IMMUNOLOGY

- Dixon, W. E.** Manual of pharmacology. 5th ed. 1921. MO D46
- This edition has been to a great extent rewritten and brought into line with present-day knowledge of the mode of action of drugs. Among the new notes in the book are those on "Twilight Sleep" and on methyl alcohol. *Pharmaceutical Journal and Pharmacist.*
- Edmunds, C. W., and Cushny, A. R.** Laboratory guide in experimental pharmacology. 1918. MOa Ed59
- The outline of experiments is simple and can easily be carried out by the average medical student in any laboratory equipped for the purpose. The first section of the book is devoted to pharmaceutical work. The experimental part is the chief section and here attention is given to biological assays and directions for work on isolated tissues and organs. *Pharmaceutical Era.*
- Fühner, Herman.** Nachweis und Bestimmung von Giften auf biologischem Wege: eine Anleitung für Pharmakologen, Gerichtsärzte, Gerichtschemiker und Apotheker. 1911. MP F95
- Karsner, H. T., and Ecker, E. E.** Principles of immunology. 1921. MV K14
- McGuigan, Hugh.** Experimental pharmacology. 1919. MO M17
- Introduction to chemical pharmacology: pharmacodynamics in relation to chemistry. 1921. ET M17
- This little volume will be useful to the organic chemist who desires to know more of the medical aspect of the subject with which he deals, and to the medical student who wishes to become more familiar with the chemical aspect of pharmacology. The chapter on volatile oils is of special interest to pharmacists. The field covered is so large that none of the material is handled in detail, and a considerable part is devoted to tests for the various substances. *Journal of Industrial and Engineering Chemistry.*

BOTANY AND PLANT CHEMISTRY

- Bastin, E. S.** College botany. For the use of students of pharmacy: a revision by W. B. Day. 1920. LE B29
- Bulletin of the Torrey Botanical Club.** Vols. 47-48. 1920-1921. LB T83
- Cook, M. T.** Applied economic botany. 1919. LEc C77
- Coulter, J. M., Barnes, C. R., and Cowles, H. C.** Text book of botany for colleges and universities. 2v. 1910-1911. LE C83a
- Vol. 1, Part 1. Morphology.
Part 2. Physiology.
Vol. 2. Ecology.
- Fritsch, F. E., and Salisbury, E. J.** An introduction to the structure and reproduction of plants. 1920. LeB F91
- The first section of the book deals with anatomy and the second with life histories and reproduction; both are copiously illustrated by photographs and diagrams, largely original, which are extremely well reproduced. In the second section the common groups are all dealt with in turn, but as large a variety of forms as possible is illustrated in each, and many interesting references of economic and commercial importance are introduced. The concluding chapter deals simply with evolution and heredity. *Pharmaceutical Journal and Pharmacist.*
- An introduction to the study of plants. 4th ed., rev. 1919. LE F91
- Ganong, W. F.** Text-book of botany for colleges. 2v. 1916-1917. LE G15

Haas, Paul, and Hill, T. G. An introduction to the chemistry of plant products. 2v. 1921-1922. EW H11

Vol. 1. On the nature and significance of the commoner organic compounds of plants.
Vol. 2. Metabolic processes.

Volume I deals primarily with the chemical side of the subject, but a sufficiency of plant physiology is included to make the book complete in itself. Volume II is devoted more to purely physiological problems. The first volume is divided into ten sections, each section dealing with a group of plants belonging to the same chemical family, such as fats, oils, and waxes; aldehydes; carbohydrates, etc. *Chemical News*.

Jeffrey, E. C. The anatomy of woody plants. 1917. LEb J37

A remarkable work of great interest and complete originality, by the professor of plant morphology in Harvard University. *Science*.

Robbins, W. W. The botany of crop plants. 1917. LEc R53

Smithsonian Institution. Contributions from the United States National Herbarium. Vols. 5-19, 1897-1916. 15v. in 19 pts. G. LG Sm99

Thatcher, R. W. The chemistry of plant life. 1921.. EW T32

The author has taken up his subject in truly a missionary spirit, and his book is a welcome addition to the meager literature on it in English. Pharmacy has always been interested in plant chemistry; the history of chemistry is replete with illustrations of valuable contributions that pharmacy has made. Now that agriculture is taking a new hold on plant chemistry, its importance will no doubt be more fully and more generally recognized. *Journal of the American Chemical Society*.

Youngken, H. W. Pharmaceutical botany. 3d ed. 1921. LE Y89

Written in an interesting manner and attractively illustrated with drawings, photographs, and photomicrographs. *Spatula*.

Zornig, H. Der Anbau von Arzneipflanzen. 1920. LFc Z77

The cultivation of medicinal plants is suggested as a means of livelihood for crippled soldiers; descriptions of plants are given, cultivation and drying methods, selection of plants, acreage required, average prices, and extent of demand. A chapter gives consideration to upwards of 50 drugs, and there is an extensive bibliographical index. *Journal of the American Pharmaceutical Association*.

PHARMACY, THEORETICAL, PRACTICAL, AND MISCELLANEOUS

American Conference of Pharmaceutical Faculties. Proceedings of the twenty-second annual meeting. 1921. TE Am35

American Drug Manufacturers' Association. Proceedings, 7th-9th annual meetings. 1918-1920. UF Am33

Contains a large amount of valuable information which will interest anybody engaged in the drug trade. *Pharmaceutical Era*.

American Druggist. Vols. 68-69, 1920-1921. PB Am33

American Journal of Pharmacy. Vols. 92-93, 1920-1921. PB Am34

American Pharmaceutical Association. Year book. Vols. 7-8. 1918-1919. UF Am35a

The general divisions of the year book are classified into subjects under pharmacy, materia medica, and chemistry. The abstracts show careful study and give in a very concise way the important essential information required on the subject and expected in a book of this kind. *Journal of the American Pharmaceutical Association*.

Apothecary and New England Druggist. Vols. 32-33. 1920-1921. PB Ap47

British Pharmaceutical Conference. Year-book of pharmacy. 1919-1920. 2v. UF G798

Contains abstracts of papers relating to pharmacy, materia medica, and chemistry contributed to British and foreign journals from July 1, 1918, to June 30, 1920, with the Transactions of the British Pharmaceutical Conference at its 56th — 57th annual meetings.

Bulletin of Pharmacy. Vols. 34-35. 1920-1921. PB B87

Caspari, Charles, Jr. Treatise on pharmacy. 6th ed., rev. by E. F. Kelly. 1920. PF C27

Creighton University, College of Pharmacy. The review. 1920. G. TR C5a

Druggists Circular. Vols. 64-65. 1920-1921. PB D84

Era Druggists' Directory. Of the United States, Canada, Cuba, Porto Rico, Manila and Hawaiian Islands, 19th ed. 1921. PC Er11

Part 1. Wholesale druggists. Part 2. Retail druggists. Part 1 contains also lists of national drug associations, state pharmaceutical associations, schools of pharmacy, state boards of pharmacy, pharmaceutical journals, and a count by states of the wholesale and retail druggists of the United States.

- Journal de Pharmacie et de Chimie.** 7me serie, Vols. 19-22. 1919-1920. PB J82
Journal of the American Pharmaceutical Association. Vols. 9-10. PB Am35
 1920-1921. TR M3b
Massachusetts College of Pharmacy. Bulletin. Vols. 9-10. 1920-1921. TR M3b
Massachusetts State Pharmaceutical Association. Proceedings, fortieth
 and forty-first annual meetings. 1921-1922. 2v. UF M382
N. A. R. D. Journal. Vols. 31-32. 1920-1921. PB N21
National Druggist. Vols. 49-51. 1919-1921. PB N22
New Hampshire. An act to regulate the practice of pharmacy and the sale of
 drugs and medicines. Chapter 122, Law of 1921. G. PZ N41
Northwestern Druggist. Vols. 28-29. 1920-1921. PB N81
Pharmaceutical Era. Vols. 53-54. 1920-1921. PB P48
Pharmaceutical Journal and Pharmacist. Vols. 104-107. 1920-1921. PB P49
Practical Druggist. Vols. 38-39. 1920-1921. PB P88
Rhode Island. General Assembly. [Clippings from] Acts of 1918 [and] Acts
 of 1921 [pharmacy law]. G. PZ R34
 — State Board of Pharmacy. Forty-third annual report. 1913. G. PZ R34
 Contains General laws of pharmacy [of Rhode Island].
Spatula. Vols. 26-27. Oct. 1919-Sept. 1921. PB Sp28
Wisconsin, University of. A century of the United States pharmacopoeia,
 1820-1920. I. The galenical oleoresins, by A. G. Du Mez. 1917. PI W75d
 Deals very fully with the subject, and although a list of 38 drugs found to yield oleoresins
 is given, attention is directed almost entirely to the seven official in the U. S. P. *Pharma-
 ceutical Journal and Pharmacist.*

PHARMACOPOEIAS AND FORMULÄRIES

- Conseil Federal Suisse, Le.** Pharmacopoea Helvetica. 1907. QR A1d
Era formulary. New and enlarged edition, by W. C. Alpers and E. J. Kennedy. SA Er11
 1914.
 A collection of nearly 8,000 formulas from recognized authorities, including American,
 English, French, and German technical literature, for manufacturers, druggists, physicians,
 hospitals, household use, and for industrial workers.
Henley's twentieth century formulas, recipes, and processes. Edited by
 G. D. Hiscox. 1920 edition. SA H38
Martindale, W. H., and Wescott, W. W. The extra pharmacopoeia. 17th
 ed. 2v. 1920. RD M36
 A new edition of this well-known work is very welcome. It has two authors, one medical,
 the other chemical, and is necessarily of a highly technical character. It contains not
 merely purely scientific chemical and physical data, but also many hints as to the manu-
 facture of synthetic drugs, as well as much information relating to patents and trade-
 marks. The treatment of certain compounds which have acquired prominence of late
 years calls for special mention. *The Analyst.*
Den Norske farmakopo, 1913. (Pharmacopoea Norvegica, ed. IV.) QM A1d
Pharmaceutical Journal. P. J. F., the Pharmaceutical Journal formulary.
 1907. G. SE P49
Pharmacopoea Belgica. Editio tertia. 1906. QF A1c
 — Troisieme edition. Premier supplement. 1912. QF A1c

COMMERCIAL PHARMACY

- Brisco, N. A.** Retail salesmanship. 1920. VQ B77
 — Retail salesmanship source book. 1921. VQ B77a
Cowan, G. J. Window backgrounds: a collection of drawings and descriptions
 of store window backgrounds. Revised, 1920. VP C83
David, D. K. Retail store management problems. 1922. VN D28
Durstine, R. S. Making advertisements. 1921. VP D93
Farrington, Frank. Store management — complete. 1911. VN F24b
Fox, I. P. One thousand ways and schemes to attract trade. 4th ed. 1921. VP F83

With but slight alteration many of the methods described could be easily adapted to any
 other particular business; the retail druggist will find a large number of hints and sugges-
 tions that can be utilized in advertising and promoting trade. All the methods have been
 gathered from actual experiences of successful business men. There are several hundred
 illustrations. *Pharmaceutical Era.*

- Gowin, E. B.** Developing executive ability. 1919. VMb G74
Contains many valuable suggestions and much useful material for the business or professional man or woman. *Library Journal*.
- Hall, S. R.** The advertising handbook: a reference work covering the principles and practice of advertising. 1921. VP H14
- Harvard University. Bureau of Business Research.** Operating accounts for retail drug stores. [Bulletin No. 16.] 1920. Vol. 2 of VNa H26
— Operating expenses in retail drug stores in 1919. [Bulletin No. 22.] 1920. Vol. 3 of VNa H26
- Hayward, W. S., and White, Percival.** Chain stores. 1922. VN H33
- Hollingworth, H. L.** Advertising and selling: principles of appeal and response. 1920. VP H72
- Huffcut, E. W.** Elements of business law. Revised by G. G. Bogert. 1917. Z340 H87
- International Library of Technology.** Vol. 59C. Single-entry bookkeeping. — Double-entry bookkeeping. — Opening, closing, and changing books. 1904. VNb In8
- Vol. 60C. Advertising as a business force. — Composition and diction. — Punctuating and editing. — Psychology of advertising. — Writing of copy. — Fundamentals of type. — Specimens of type. 1917-1918. VP In8
- Vol. 61C. Planning the layout. — Proofreading. — Display arrangement. — Retail advertising. — Department-store advertising. 1918-1919. VP In8a
- Vol. 118B. Selling as a business force. — Mental qualities needed for salesmanship. — Development of the mental qualities. — Health and appearance. — Study of the customer. — Successful reasoning. — Making the sale. — Retail salesmanship. 1911-1916. VQ In8
- Vol. 132. Corporation organization and accounting. — Partnerships. — Auditing. 1913-1914. VN In8
- Vol. 133. Cost accounting. — Analysis of accounts. — Insolvent and decedents' estates. 1913-1914. VNa In8
- Ivey, P. W.** Elements of retail salesmanship. 1920. VQ Iv3
- Kahnweiler, Bert.** Common sense drug store advertising. 2 parts. 1921. VP K12
- Language for men of affairs.** 2v. 1920. VO L26
Vol. 1. Talking business, by J. M. Clapp.
Vol. 2. Business writing, edited by J. M. Lee.
- Norton, H. R.** Textbook on retail selling. 1919. VQ N82
- Nystrom, P. H.** Retail store management. 1917. VN N99
- Osborn, A. F.** A short course in advertising. 1921. VP Os1
A very thorough text on the elements of advertising. Mr. Osborn goes to the root of the matter and makes his book very clear.
- Scott, W. D.** Influencing men in business. 3d ed. 1918. VMc Sco86
— Psychology of advertising. 1921. VP Sco86
- Whitehead, Harold.** How to run a store. 1921. VN W58

PHYSICS AND GENERAL SCIENCE

- Burns, David.** An introduction to biophysics. 1921. WI B93
While the subject-matter is not entirely new, there is little doubt that the point of view is novel. In no other book that we know are the boundaries and landmarks of this new trend of thought more clearly defined. The book covers a wide range of ideas and there is a relative absence of mathematical formulae which many would have felt forced to include. *The Analyst*.
- Pickering, E. C.** Elements of physical manipulation. 2v. G. WH P58
- Schlicht, Moritz.** Space and time in contemporary physics: an introduction to the theory of relativity and gravitation. 3d ed. 1920. WHa Sch39
The most successful scientific presentation of the theory of relativity. *Library Journal*.
- Scientific Monthly.** Vols. 9-13. July, 1919-Dec. 1921. WB Sci27
- Smithsonian Institution.** Annual report, 1919, 1920. 2v. W Sm69
Besides the annual reports of the Regents, these volumes contain many articles by different authors on a variety of subjects, such as — The botanical gardens of Jamaica. — The chemistry of the earth's crust. — Narcotic daturas of the Old and New World. — Vitamins. — Giant suns. — Glass, and some of its problems. — A great chemist, Sir William Ramsay. — Wireless telephony. — Radium and the electron.

- Watson, W.** A text-book of physics. 7th edition revised by Herbert Moss. 1920. WH W33
One of the most satisfactory of the more extensive books on physics recently published. *Library Journal*.

HISTORY AND BIOGRAPHY

- Browning, Oscar.** General history of the world. 1913. Z909 B82
Duclaux, Emile. Pasteur, the history of a mind. 1920. BD*i* P26d
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